

Amendments to the claims:

1-22 (cancelled)

23- (new) An *in vitro/ex vivo* method for the cultivation of connective tissue cells or progenitor cells thereof comprising the step of contacting said cells with a matrix comprising polysulphated alginate.

24- (new) The method according to claim 23, wherein said matrix is suitable for the implantation into the human or animal body.

25- (new) The method according to claim 23, wherein said matrix further comprises nutrient media.

26- (new) The method according to claim 23, wherein said matrix further comprises unsulphated alginate.

27- (new) The method according to claim 23, wherein said polysulphated alginate and unsulphated alginate are present in a weight ratio of between 1:10 and 1:100.

28- (new) The method according to claim 23, wherein said cells are connective tissue cells.

29- (new) The method according to claim 23, wherein said cells are chondrogenic.

30- (new) The method according to claim 29, wherein said cells are chondrocyte precursor cells.

31- (new) A matrix comprising polysulphated alginate and mammalian connective tissue cells or progenitor cells thereof.

32- (new) The matrix of claim 31, wherein said cells are osteochondral cells.

33- (new) The matrix of claim 32, wherein said cells are chondrogenic cells.

34- (new) The matrix of claim 31, wherein said cells are mesenchymal stem cells.

35- (new) The matrix of claim 31, which further comprises nutrient media.

36- (new) The matrix of claim 31, wherein said polysulphated alginate is present in a concentration between 100 ng and 500 µg/ml.

37- (new) The matrix of claim 31, which further comprises unsulphated alginate.

38- (new) A pharmaceutical composition comprising a matrix according to claim 31.

39- (new) A method for the treatment or prevention of osteochondral defects comprising administering to the osteochondral defect a matrix comprising a polysulphated alginate.

40- (new) The method of claim 39, wherein said matrix further comprises connective tissue cells or progenitor cells thereof.

41- (new) The method of claim 39, wherein said cells are osteochondral cells.

42- (new) The method of claim 39, wherein said cells are chondrogenic cells.